

Serial No. 10/724,314

140275-1

REMARKS

Applicants have carefully considered the Office Action mailed on May 2, 2007. In response to the Office Action, Applicants amended claims 1, 8-10, 12 and 22 and canceled claims 4, 6, 7, 11, 13 and 14. Claims 1-3, 5, 8-10, 12 and 15-22 are pending in the present patent application. No new matter has been added. In view of the above amendments and the following remarks, Applicants request further examination and reconsideration of the present patent application.

The Examiner objected to the drawings under 37 C.F.R. 1.83(a) for failing to show every feature of the invention specified in the claims, particularly the order of reconstruction specified in claim 12. After careful consideration, Applicants find no reference to reconstruction in claim 12. Reconstruction is claimed as a feature of the invention in claims 2, 3, 8, 18, and 21. Applicants believe the Examiner may have intended to specify reconstruction as claimed in claims 2, 3, 8, 18, and 21. Applicants respectfully traverse the objection to the drawings under 37 C.F.R. 1.83(a). It is respectfully submitted that a person possessing ordinary skill in the art will understand that generation and providing of reconstruction data to allow reconstruction of the group of consecutive cross sectional images of a three dimensional volume being imaged occurs as a component of decompression directly prior to display of the image which is adequately shown in Figure 2 (36, 38) and as a component of navigation of fine images which is adequately shown in Figure 6 (110). Therefore, it is respectfully requested that the objection to the drawings under 37 C.F.R. 1.83(a) be withdrawn.

The Examiner rejected claim 11 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have currently canceled claim 11 and amended claim 10 to distinctly claim the subject matter which Applicants regard as the invention to overcome this rejection. In particular, Applicants have amended claim 10 to distinctly claim providing a third representation of the cross sectional images by performing a differential pulse code modulation on the first axially transformed representation in a spatial direction, the third representation having a transformed spatial resolution comparatively less than the spatial resolution of the first axially transformed representation. Therefore, it is respectfully requested that the rejection of claim 11 under 35 U.S.C. 112 be withdrawn.

Serial No. 10/724,314

140275-1

The Examiner rejected claims 1-21, under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 6,567,081, hereinafter Li), in view of Dekel et al. (US 2003/0005140, hereinafter Dekel). Applicants respectfully traverse the rejection of claims 1-21 under 35 U.S.C. 103(a) over Li in view of Dekel. It is respectfully submitted that the Applicants' invention as amended and recited in independent claims 1, 10 and 12 and claims depending therefrom, is not obvious in view of the applied references, taken individually or in combination. Applicants further submit that the applied references fail to teach or suggest the means for processing medical image data as recited in amended independent claims 1, 10 and 12.

In order to establish a prima facie case of obviousness, all elements of the recited invention must be considered. Applicants respectfully submit that the applied references do not teach, suggest, or disclose (either individually or collectively) the independent claims 1, 10, and 12 with regard to performing a differential pulse code modulation transform on the axially transformed representation in a spatial direction. Li merely discloses a method of processing image data using alignment and 3D wavelet transform techniques. Li does not disclose, teach or suggest the use of a differential pulse code modulation to further transform the axially transformed representation in a spatial direction. Dekel merely discloses the use of 3D wavelet transform techniques for medical images. Dekel does not disclose, teach or suggest the use of a differential pulse code modulation to further transform the axially transformed representation in a spatial direction.

Further, there is no motivation to combine Li with Dekel to obtain the Applicants' recited invention. As discussed above with reference to Li and Dekel, Applicant submits no reasonable combination of Li and Dekel would obtain Applicants' recited invention. Nowhere do the Li or Dekel references show or suggest the use of a differential pulse code modulation to further transform the axially transformed representation in a spatial direction. Therefore Applicants respectfully submit there is no reasonable motivation or suggestion to combine the applied references. Further, since neither the Li nor Dekel references teach the recited use of differential pulse code modulation, no reasonable combination would obtain Applicants' recited invention.

Accordingly, Applicants respectfully submit that the claimed invention, as recited in amended independent claims 1, 10, and 12 defines allowable subject matter over the applied art. Claims 2, 3, 5, 8, 9, and 15-21 depend directly or indirectly from independent claims 1, 10 and 12 respectively. Accordingly, Applicants submit that claims 2, 3, 5, 8, 9, and 15-21 are allowable by

Serial No. 10/724,314

140275-1

dependency. Thus, it is respectfully requested that the rejection of claims 1-3, 5, 8-10, 12, and 15-21 under 35 U.S.C. 103(a) be withdrawn.

The Examiner rejected claim 22 under 35 U.S.C. 103(a) as being unpatentable over Li in view of Dekel. Applicants respectfully traverse the rejection of claim 22 under 35 U.S.C. 103(a) over Li in view of Dekel. It is respectfully submitted that the Applicants' invention as amended and recited in independent claims 22 is not obvious in view of the applied references, taken individually or in combination. Applicants submit that the applied references fail to teach or suggest the means for specially configuring a processor module to compress the group of consecutive cross sectional images in the z-axis direction to generate an axially transformed representation of the group, the axially transformed representation having a second axial resolution lower than the first axial resolution, and to perform a differential pulse code modulation on the axial representation of the group in a spatial direction, the spatially transformed representation having a spatial resolution lower than the first spatial resolution.

Applicants respectfully submit that the applied references do not teach, suggest, or disclose (either individually or collectively) the independent claim 22 with regard to a processor module specially configured to compress the group of consecutive cross sectional images in the z-axis direction to generate an axially transformed representation of the group, the axially transformed representation having a second axial resolution lower than the first axial resolution, and to perform a differential pulse code modulation on the axial representation of the group in a spatial direction, the spatially transformed representation having a spatial resolution lower than the first spatial resolution. Li merely discloses a computing unit for processing of 3D images and performing 3D wavelet compression. Li does not disclose, teach, or suggest a processor module configured to perform a differential pulse code modulation on the axial representation of the group in a spatial direction.

Accordingly, Applicants respectfully submit that the claimed invention, as recited in amended independent claim 22 defines allowable subject matter over the applied art. Thus, it is respectfully requested that the rejection of claim 22 under 35 U.S.C. 103(a) be withdrawn.

Applicants submit that the Examiner has failed to provide a basis in the art for combining the applied references that would support a prima facie case of obviousness. Accordingly, Applicants respectfully submit that the claimed invention, as recited in now presumably

Serial No. 10/724,314

140275-1

allowable independent claims 1, 10, 12 and 22 define allowable subject matter over the applied art. Withdrawal of the rejections is respectfully requested, and allowance of claims 1, 10, 12 and 22 is respectfully solicited. Claims 2, 3, 5, 8, 9, and 15-21 depend directly or indirectly from claims 1, 10, 12 and 22 and are therefore similarly patentable by dependency.

In view of the foregoing amendment and for the reasons set out above, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number below.

Respectfully submitted,



Jean Testa
Reg. No. 39,396

July 23, 2007
General Electric Company
Building K1, Room 3A54A
Schenectady, New York 12301
Telephone: (518) 387-5115
Fax: (518) 387-7751